Abstract of the Disclosure

A shared system resource such as a file server includes an integrated, cooperative cluster of domains that include hierarchically related domains and peer related domains, each performing functions supporting the services provided by the system resource. Hierarchically related domains include a higher level domain and a lower level domain respectively performing higher and lower level operations of functions supporting the system resource services and peer related domains include parallel domains performing operations in mutual support of functions supporting the system resource services. A domain may include fault handling mechanisms operating independently of and cooperatively with fault handling mechanisms of other domains, and domain may be comprised of domains. In hierarchically related domains, the lower level domain includes peer related domains performing operations in mutual support of functions of the upper level domain and peer domain includes a monitoring mechanism monitoring operations of the other peer domain that are related to the operations performed in support of the upper level domain. Each monitoring mechanism is responsive to detection of a failure in the other peer domain for directing the peer domain in which the monitoring mechanism resides in assuming the operations performed by the peer domain in support of related functions of the upper level domain independently of operations of the peer domain and independently of a source of the failure in the other peer domain.